

DVD2SVCD 1.0.9 build 3 Newbie Reference

Contains quick overview of many of the options available to get you started.

[Conversion](#)[Misc.](#)[Finalize](#)[CD Image](#)[Subtitles](#)[bbMPEG](#)[DVD Rip](#)[DVD2AVI](#)[Audio](#)[Frameserver](#)[Bitrate](#)[Encoder](#)[Pulldown](#)[Recommended reading](#)[Basic Info](#)

Hit back browser button to return to top

Conversion

IFO file manually choose the biggest size IFO on the VIDEO_TS dir on the DVD disc or if you the have .ifo/vobs on your hd.

IFO file (CD icon) automatically selects IFO file with the longest Movie Length

IFO file ... (three dots) add or delete vob files, useful for encoding DVD disc 1&2 as one.

Movie length shows the time/duration of the movie.

Movie length (Down Arrow) selection of chapters (rip with internal routines to enable)

Aspect ratio It reads the vob files to determine either 4:3 fullscreen or 16:9 widescreen. Usually it's correct but best to verify with amazon.com/dvd or use Preview Video (still picture) to be safe. If it says widescreen letterbox choose 4:3.

-- 4:3 (No borders, encoded as 4:3) choose this if dvd is 4:3, fullscreen, widescreen letterbox, or anamorphic letterbox.

-- 16:9 (borders added, encoded as 4:3) choose this if dvd is widescreen, anamorphic, 16:9, 2:35:1, or 1:85:1.

-- Anamorphic (no borders, encoded as 16:9) this is an advanced settings. Perhaps if you have a widescreen TV you could try it or just editing the .avs file.

NTSC to PAL check if using PAL if in Europe, etc.

Automatic Shutdown turns off computer when done processing. Gives 60 secs to cancel.

Deinterlace leave at default No deinterlacing for NTSC. If you have a PAL DVD try Telecide or Blendfields for a concert, music dvd.

Selected Audiotracks can support up to 2 audio streams. Usually AC3 6ch is default. To add another audio stream (another language for instance) click arrow under Audio stream no. and choose 2. AC3 2ch is usually director's commentary

Go!

-- **Start Conversion** (if dvd rip is unselected and vobs already exist on harddrive). Begins process.

-- **Rip and Convert** begins process of ripping and encoding

-- **Rip Only** rips vobs to HD for later processing or used in conjunction with dvd2svcd batch.bat for batch conversions (advanced).

-- **Preview Video (still picture)** you can determine correct aspect ratio, choose subtitle positioning, preview resize effects and deinterlacing options and gauge how encoded video will look like.

-- **Movie info** (see CD Image tab)

Misc.

Set default output folder this is the same as choosing under DVD Rip tab 'Select new default folder when ripping starts. It's a good idea to also change this for each new rip.

Set folder structure This places your various output files in subfolders of the default output folder keeping it

organized. The only files left in the root default folder are you .xml files, svcdinfo.txt and .bin .cue cd images.

Suggested names for output folders are **source, audio, video, muxed, subs**.

Don't delete any files this will keep your a few extra unnecessary files. This option is no longer required to use the Recover feature. Highly recommended not enabling this option to minimize needed disc space.

Load settings and **Save settings** enables profiles with various parameters to be used.

Recover resume from a certain point in time. Huge time saver. Need more disc space.

Process priority for all used programs default **Normal** in some instances speeds up CCE encoding by just a fraction rather than High allowing more CPU to frameserve CCE.

DVD2SVCD level Normal or Advanced. You'll notice changes in bbMPEG tab and Frameserver tab. Keep it at Normal unless you wish to make a VCD.

---**Input file type**---

DVD rips DVD to SVCD, VCD and if you wish XSVCD and XVCD.

AVI Only Supports Framerates of 23.976, 25.000 and 29.970, and audio types pcm, mp2, mp3 and ac3.

DVB(pva) DVB- Digital Video Broadcast | PVA - Packet Video Audio (satellite tuner card)

---**Output file type**---

MPEG-2 choose for SVCD

MPEG-1 choose for VCD

Finalize

Run this (per CD image) advanced function, run own batch file per CD image

Parameters stay away newbie....stay far away

CD Image

I-Author commercial app does chapters, subtitles. Used to be the the one to use before vcdxbuild supported subtitles. It'll create .cif images. Install **CDmage** 1.02.1 Beta 5 and check it in the Finalize tab to convert your CIF images to Bin Cue images. You cannot burn CIF images with Roxio/Adaptec EasyCD 5.x or later.

Don't make Images creates bbMPEG_Muxed_File00.mpg and you can use VCDEasy, TSCV, Nero to create your own Cue Bin images with motion menus, still menus, chapters, etc.

VCDImager simple creation of Cue Bin images with a CD Label and Movie title

VCDXBuild Creates Cue Bin CD images. Adds chapters, title picture, change CD picture.

Movie title shows in xml file (optional)

CD Label displays name of CD on a computer (optional)

Title picture right click and choose Get picture from IMDB. Don't forget to either get a new picture when ripping a new movie.

Change CD pic. reaches end of CD it'll loop endlessly (play, show forever) this picture. NTSC 480x480 and PAL 480x576

Use ChangeCD picture on all CD's if unchecked it won't put your ChangeCD picture on last CD

Use Entrysvcd (might fix the shown time) might work for some DVD players

Data Preparer shows in xml file (found under Movie info)

Include movie info on CD SVCDInfo.txt is put on the CD which contains imdb.com database info if retrieved from internet and used encoding parameters

Include XML on CD vcdxbuild uses this file to create chapter points,etc. Useful for reference.

Use MPEGAV instead of MPEG2 directory creates non-compliant SVCD. For certain DVD players.

Fixed chapters default 60 seconds

DVD chapters exactly the same as on the original DVD chapters.

---**PBC Use Selections** prev, next, stop/return, chapter via keypad number selection

---**PBC Use Playlist** prev, next and stop/return

--- **No PBC** no chapters, might display time of svcd for some dvd players.

Movie info (IMDB) type in movie title and hit ENTER or click down arrow choose correct movie and it'll automatically query and retrieve various movie information.

Subtitles

Rip subtitles extracts hundreds of .bmp subtitle images

SVCD Subtitles True selectable subtitles as specified by Philips to be turned on/off if your dvd player supports it.

CVD Subtitles Alternate selectable subtitles (like I–author uses). Use if SVCD subtitles don't work. Remember no DVD software currently supports SVCD or CVD subtitles.

Permanent Subtitles encoded in the movie, can't be turned off.

ms between subs just leave milliseconds of 100 unless you notice it out of synch

Resize 100% — change Permanent (only) Subtitles relative size

Std. Y–Pos NTSC and PAL leave at –1 to have same positioning as the DVD subtitles. Use 'Preview Video' to choose exactly subtitle positioning.

Subtitle palette allows changing of colors to your hearts content

bbMPEG

Movie offset seconds leave at default 2. . Don't adjust unless experiencing synch problems.

CD Overlap seconds CD#1 stops at 54:38 and CD#2 starts playing at 54:33 if 5 seconds is selected. Max overlap is 30 seconds.

DVD Rip

Activate DVD ripping rips vobs from DVD to your HD Rarely auth.dll is unable to decrypt dvd keys and authenticate the dvd. In that case you may need to authenticate the DVD with WinDVD or PowerDVD by playing it for 2 seconds to unlock the DVD. ASPI drivers should be installed.

Use vStrip one of the top DVD rippers

Use Internal routines Use is required if using selective chapters in the Movie length option.

Select new default folder when ripping starts recommend checking this to avoid overwriting existing vobs files and definitely use it for batch ripping/encoding.

Eject DVD when ripped takes about 10 to 20mins to rip to HD usually

and reload after ejecting DVD it'll reload it in case your away from your computer

DVD2AVI

iDCT Algorithm just leave it as 32–bit SSE MMX

NTSC Field Operation (Force Film)

dvd2avi analyzes the movie when playing it by checking the created .d2v file

Luminance gain default 0 (0=128 ..so a vaule of 8 is 128 + 8 =136) contrast

Luminance offset default 0 (0=128) brightness (usually never touch luminance)

Automatic should work vast majority of the time. Resort to choosing manually only if Automatic fails. The film will be jerky or show lines. This is rare though.

On NTSC/Film % fluctuates between 90– 99%, this is the most common

Off NTSC/Film % constant with no % NTSC

IVTC (Slow as hell) NTSC/Film % is lower than 90% it'll use IVTC, i.e. anime Only on NTSC

Audio

Autodetect Azid gain (2 pass) you want this enabled. Finds highest –dB level without distortion.

Azid gain offset if autodetect sound level is not loud enough try a value between 6 to 15.

Output mode just leave on Stereo

Bitrate popular choices are 224 or 192. Technically you can choose 64 to 384Kbps.

Audio 1 downsample 48 → **44.1** recommend unchecked (svcd spec is 44.1Khz) You can save anywhere from 10 mins. to 2 hours in processing time. If you don't downsample it only wastes 2KB per CD All DVD players play SVCD audio in 48Khz.

Frameserver

Resize method (use arrows to change order of commands in in .avs file..advanced)

—**SimpleResize (fast)** is default. Unfiltered, doesn't soften. 20–25% increase fastest for encoding

—**Bilinear** softens picture a tad, about 10% faster encoding

—**BicubicResize** sharpens and arguably achieves best quality results but is the slowest

Avisynth Bicubic b value and c value leave defaults of **b value** 0.00 **c value** 0.75

TemporalSmoother use when doing a One pass VBR or encoding from a noisy source. 40% reduction in video encoding speed. Use the defaults Strength 2 and Radius 1.

Sharpen default **off** (settings from 0 to 1.0) gets rid of haze effect but increases noise so increase noise filter.
40% reduction in video encoding speed

Edit the Avisynth Script File (not for newbies) Advanced filters, resizing, etc.

No Editing continues through the whole process uninterrupted

Edit when dvd2avi processing is done right after analyzing before audio pops up .avs file

Edit as part of CCE encoding just before CCE starts pops up .avs file

Flip vertical flips your video 180 degrees.

Add ResampleAudio adds 'ResampleAudio (44100) to .avs file but doesn't downsample audio. Only use it if you are experiencing CCE crashes on Althon CPUs.

Resize to

--- **SVCD (480 x 480/576)** = 480x480 NTSC, 480x576 PAL

--- **DVD (720 x 480/576)** used for DVD to DVD-R

--- **VCD (352 x 240/288)** roughly half resolution of a DVD

--- **CVD (352 x 480/576)** Chinese Video Disc, squeeze more time on cd albeit lower resolution

Bitrate

Choose parameters and how many CDs **740** is 74min, **800** is 80min, **900** is 90min, **999** is 99min CD. Look for the bitrate on the far right side. Make sure the lowest bitrate isn't lower than 1600 (example) and if it is adjust your minute settings to get quality video using VBR. CBR bitrate should be 2200 or above.

Max. 2530 safety setting to not exceed SVCD spec. Audio + Video bitrate = total bitrate

Make sure Max. avg bitrate is 120 below your Max bitrate to avoid possible CCE errors.

Min. 300 set this value to 0 for more precise bitrate calculations

Min. avg 1600 it'll never drop below this. Guarantees decent video quality.

Max. avg 2230 you could increase this if you know what your doing to maximize your CDs

Adjust the audio bitrate if the total bitrate is too high (Max. total birtate is 2723kb/sec)

For VCD set **Max. Min. Min. avg Max. avg** all to **1150**

Encoder

---CCE---

CBR Constant Bitrate. Uses many CDs and has high bitrate. Fast encoding. Usually 2500 bitrate.

One pass VBR Variable Bitrate. Better image quality by using **Q. Factor** of 3. Many CDs with high bitrate. Relatively quick encoding.

Multipass VBR most popular video encoding method. Recommend 3 or 4 passes.

Image Quality Priority leave default checked and value of 17

Anti noise filter leave default checked and value of 2

Field Order leave default Automatic (only manually change if to field B if your video is jerky) in CCE manual this is referred to as Upper Field first

CCE Advanced Settings (only shown for default settings)

Linear quantizer scale checked

Zigzag scanning order checked

Constrained parameter set checked (only shown for mpeg-1)

DVD Compliant unchecked

Progressive frames checked

Intra DC decision: Auto unchecked 10

GOP Sequence M = 3 M/N = 5

SEQ Header every 1

Restrict auto I frame insertion unchecked

Close all GOPs unchecked

Safe mode (frameserving)

[VFAPI](#) is default use only if you encounter CCE crashes. Slows frameserving/encoding about 30%.

DVD2SVCD\VFAPI\Reader\VFAPICnv-EN.exe

or

[Link2](#) (cost\$) enables you to use Cinemacraft SP (CCE) 2.62 or 2.64 instead of CCE SP 2.5.

Unzip to a subdir in DVD2SVCD and Install as per instructions in ReadMe.txt
DVD2SVCD\Link2\link2.exe

---TMPGEnc---

Constant Bitrate CBR should use at least 2300 or above for good results
2pass variable bitrate (VBR) default takes awhile but looks the best
Constant quality (CQ) hard to accurately predict cd size (not suggested)

Motion search precision allows to find action sequences to increase bitrate for those scenes
Highest quality (very slow) default --save quite a bit of encoding time by choosing High quality

Field Order

Top field first (field A) default
Bottom field first (field B) use for DV source

Pulldown

Only if your source is NTSC will it perform Pulldown. Process converts 24fps film to 29.97fps video by repeating one film frame as three fields, then the next film frame as two fields. This saves time by not having to have CCE encode only 24fps rather than 29.97fps.

Recommended reading

[DVD2SVCD Guide](#) by doom9

[DVD basics](#) by doom9

[SVCD Overview](#)

[SVCD standalone DVD players](#)

Aspect ratio [flash explanation](#) and [gregl here](#) and [doom9 here](#) and [howstuffworks.com](#)

But before you get too excited read the legality first of DVD backup.

[Digital media and the DMCA](#) by Ben Rudiak

[DMCA analysis](#) by doom9

[DMCA revisited](#) by doom9

Basic Info

You can fit 807MB mpeg2 on a 80min CD

Audio CD, VCD, SVCD is not the same as a data cdrom (error correction)

Info below is stolen from [here](#) .

$(44,100 \text{ Hz}) \times 16 \text{ bit} \times 2 \text{ channels} = 1,411,200 \text{ bits/sec}$, $1,411,200 / 8 = 176,400 \text{ bytes/sec}$

75 frames (also called blocks) in a second, $176,400 / 75 = 2,352 \text{ bytes}$

1 block = 2,352 bytes, 1 second = 75 blocks (frames), 1 minute = 60 seconds

74min CD (60secs x 74min = 4,440secs x 75 blocks = 333,000bytes)

80min CD (60secs x 80min = 4,800secs x 75 blocks = 360,000bytes)

74 minutes (CD-DA) = $333,000 \times 2,352 = 783,216,000 \text{ bytes} = 746.9 \text{ MB}$

80 minutes (CD-DA) = $360,000 \times 2,352 = 846,720,000 \text{ bytes} = 807.5 \text{ MB}$

SVCD Playback

Most use standalone DVD players to view the movie on TV. You can view it on any computer with a cd-rom using DVD software such as [WinDVD](#) and [PowerDVD](#), neither of which supports selectable subtitles though. If you can't get it to play try file mode and select the \MPEG2\AVSEQ01.MPG to watch.

System Requirements

Intel Pentium 4, Pentium III, Celeron (533 MHz or better), AMD Athlon, AMD Duron. Minimum 256MB RAM for all practical purposes. My tests show 256MB rather than 512MB 0.4% or RT 0.005 slower so more memory won't increase encoding speed but could help if your using tons of programs simultaneously though.

Space requirements (approximate) for 3 hour DVD

2.5GB CD images (Cue/Bin or CIF)
 7.5GB vobs (ripped from dvd)
 5.0GB output (audio/video processed files)
 16GB or more of harddisk space would be optimal.
 7GB or less might suffice depending upon factors such as length of movie, audio and video bitrates, encoding methods, etc.

Speed

- NTSC 480x480 = 230,400 pixels, PAL 480x576 = 276,480 pixels. PAL encodes slower than NTSC since it has 17% more pixels to encode.
- 4:3 source encodes quicker than 16:9 source
- Verify that DMA (direct memory access) is enabled for your harddrive(s) to avoid wasting precious CPU cycles.
- Don't downsample 48Khz --> 44.1Khz to save time (unnecessary)
- CCE multipass VBR use 3 or 4 passes instead of 5
- BicubicResize results in the **slowest** encoding speed
- Bilinear **increases** encoding speed about **10%**
- SimpleResize **increases** encoding speed about **20-25%**
- TemporalSmoother **slows** encoding speed about **40%**
- Sharpen **slows** encoding speed about **40%**
- Safe Mode (VFAP Slow!) **slows** encoding speed about **30%**
- Deinterlacing **slows** encoding speed by about [SmartDeinterlace **40%** | Blendfields **10%** | SeparateFields/SelectEvery(PAL) **15%** | VerticalReduceBy2(PAL) **20%** | Telecide(PAL) **25%**]
- TMPGEnc takes much longer to encode than CCE

Tips

- Try 128, 160, 192 rather than 224kbps audio for increased video bitrate. (SVCD spec. is 224)
- First rip? Rip the smallest DVD chapter and observe the process.
- Don't waste cds. View mount your SVCD with daemon tools and view with WinDVD or PowerDVD to check video quality and for synch issues.
- Cut out the credits by ripping with internal routines or smartripper and deselect the last chapter. Verify with software DVD player or in your DVD player the credits are indeed a chapter.
- The Demo version of CCE encodes a logo into the video.
- Trouble ripping or authenticating the DVD, install ASPI drivers.
- Synch issues, can't rip dvd for life of you. Try internal routines*, vstrip, smartripper*, dvddecrypter. [*can rip chapter(s)] to save time debugging
- CCE crashes or Avisynth access violation errors could be bad memory modules. Test for free with [mementest86](#) memory checkers (requires one blank floppy). Double check your motherboard's FSB matches the memory modules. Try not to mix various brands of memory.
- Title and Change CD Picture. NTSC 480x480, PAL 480x576. Suggest fitting your text (if any) into the 450x450 area of your 480x480 image for NTSC and 450x546 area for PAL. Otherwise it'll get chopped off and won't show on your TV.